

The embodiments of the invention in which an exclusive property or privilege is claimed are as follows:

1. An interior rearview mirror assembly suitable for use in a vehicle comprising:

a rearview mirror mount formed from polymeric material having a first color, said rearview mirror mount adapted for attachment to one of a windshield portion of the vehicle and a header portion of the vehicle;

5 a rearview mirror housing, said housing formed from polymeric material having a second color, and a reflective rearview mirror element included in said housing;

a rearview mirror support formed from polymeric material having a third color;

a first pivot element formed from polymeric material having a fourth color;

a second pivot element formed from polymeric material having a fifth color;

10 said support being pivotally attached to said mirror mount by said first pivot element, said rearview mirror housing being pivotally attached to said support by said second pivot element;

15 at least one electrical accessory included in said rearview mirror housing, said assembly including electrical conductors for electrically connecting said electrical accessory to the vehicle electrical system, said conductors extending through said first and second pivot elements and said mirror support to said rearview mirror housing;

20 wherein each of said mirror mount, said mirror support, said rearview mirror housing, said first pivot element, and said second pivot element is formed in its respective color by molding from polymeric material of that color.

2. The rearview mirror assembly of claim 1 wherein said first, second, third, fourth, and fifth colors are substantially the same color.

3. The rearview mirror assembly of claim 2 wherein said substantially the same color comprises black.

4. The rearview mirror assembly of claim 1 wherein at least two of said mirror mount, said mirror support, said rearview mirror housing, said first pivot element and said second element joint are molded from polymeric materials of different colors.

5. The rearview mirror assembly of claim 1 wherein at least one of said first and second pivot elements comprises a ball pivot member, said support having a socket which receives and frictionally engages said ball pivot member.
6. The rearview mirror assembly of claim 5 wherein said support has two ends, one of said ends including said socket, the other of said ends comprising a ball pivot member.
7. The rearview mirror assembly of claim 5 wherein said support comprises a hollow sleeve having two open ends, said socket included at one of said ends.
8. The rearview mirror assembly of claim 7 wherein the other of said two ends of said support also includes a socket which receives and frictionally engages a ball pivot member comprising the other of said first and second pivot elements.
9. The rearview mirror assembly of claim 8 wherein said support includes a spring receiving surface, and an external spring member mounted on said spring receiving surface for enhanced frictional resistance to movement of a ball pivot member in said socket.
10. The rearview mirror assembly of claim 9 wherein said support includes an end surface at each end, each of said sockets being spaced inwardly from said end surface in its respective end of said support, said assembly including a pair of external spring members, each of said external spring members being positioned immediately adjacent said end surface at its
5 respective support end.
11. The rearview mirror assembly of claim 10 wherein said external spring members each comprise an annular split ring.
12. The rearview mirror assembly of claim 9 wherein each end of said support includes a plurality of axially extending slots defining flanges therebetween, said flanges at each end of said support being compressible by said external spring member which is received thereover.
13. The rearview mirror assembly of claim 8 wherein said hollow sleeve is resilient and provides frictional resistance to pivotal movement of said ball pivot member in said socket,

said ball pivot member being compression fitted in said socket and having an interference fit therein.

14. The rearview mirror assembly of claim 8 wherein the surface of each of said sockets includes at least one protrusion for engaging said ball pivot member for enhanced frictional resistance to movement of said ball pivot member.

15. The rearview mirror assembly of claim 14 wherein the surface of each of said sockets includes a plurality of micro protrusions.

16. The rearview mirror assembly of claim 8 further including a vibration dampening member positioned within said hollow sleeve intermediate said sockets.

17. The rearview mirror assembly of claim 8 further including a stiffening insert molded within said hollow sleeve.

18. The rearview mirror assembly of claim 8 wherein said hollow sleeve is rectilinear.

19. The rearview mirror assembly of claim 8 wherein said two ends of said support extend at an angle to one another.

20. The rearview mirror assembly of claim 8 wherein said hollow sleeve includes an interior space therewithin, said assembly including another electrical accessory which is mounted within said interior space of said hollow sleeve.

21. The rearview mirror assembly of claim 5 wherein said support includes a spring receiving surface and an external spring member mounted on said spring receiving surface for enhanced frictional resistance to movement of said ball pivot member in said socket.

22. The rearview mirror assembly of claim 21 wherein said support includes an end surface at said one end of said support, said socket being spaced inwardly from said end surface, said external spring member being positioned immediately adjacent said end surface.

23. The rearview mirror assembly of claim 22 wherein said external spring member comprises an annular split ring.

24. The rearview mirror assembly of claim 23 wherein said one end of said support includes a plurality of axially extending slots defining flanges therebetween, said flanges being compressible by said external spring member which is received thereover.

25. The rearview mirror assembly of claim 1 wherein said electrical conductors extend through said rearview mirror support.

26. The rearview mirror assembly of claim 25 wherein each of said first and second pivot elements includes a wire passageway therethrough.

27. The rearview mirror assembly of claim 26 wherein said electrical conductors comprise wiring extending through said wire passageways through said first and second pivot elements.

28. The rearview mirror assembly of claim 27 wherein said mirror mount also includes a wire passageway therein, said wiring also extending through said wire passageway in said mirror mount.

29. The rearview mirror assembly of claim 1 wherein said electrical conductors comprise electrical bus bars molded within said rearview mirror support.

30. The rearview mirror assembly of claim 1 wherein said rearview mirror support includes a cable-way through which said electrical conductors pass.

31. The rearview mirror assembly of claim 30 wherein said cable-way comprises a hollow housing on the exterior of said support.

32. The rearview mirror assembly of claim 31 wherein said cable-way is formed integrally with said support.

33. The rearview mirror assembly of claim 32 wherein said cable-way is formed by molding said cable-way in said support.

34. The rearview mirror assembly of claim 30 wherein said cable-way includes a cover which may be opened to insert said electrical conductors therein and closed over said conductors.

35. The rearview mirror assembly of claim 34 including a fastener for holding said cover in a closed position.

36. The rearview mirror assembly of claim 34 wherein said cable-way comprises a trough extending at least partially along said support, said cover being closeable over said trough to retain said conductors therein.

37. The rearview mirror assembly of claim 1 wherein said rearview mirror mount includes a means on one surface for pivotal attachment to said support, and cooperating receiving members on another surface which engage a windshield mounted attachment member on the inside surface of the windshield of the vehicle on which said assembly is mounted.

38. The rearview mirror assembly of claim 37 wherein said means for pivotal attachment to said support comprise a projection including a ball pivot member forming said first pivot element.

39. The rearview mirror assembly of claim 38 wherein said mirror mount includes a body having an interior surface facing the interior of the vehicle when mounted on the vehicle, said mounting projection extending from said interior surface at a position centered with respect to the position of said receiving members.

40. The rearview mirror assembly of claim 37 wherein said mirror mount further includes a fastener for securing said mirror mount to the windshield mounted attachment member.

41. The rearview mirror assembly of claim 37 wherein said mirror mount further includes a securing lever which is movable between a first release position and a second securing position, said lever adapted to engage the windshield mounted attachment member when

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moved to said second securing position and said receiving members engage the windshield
5 attachment member to retain the mirror mount on the windshield mounted attachment
member.

42. The rearview mirror assembly of claim 41 wherein said mirror mount includes a body
having an aperture therethrough in which said securing lever is pivotally mounted, said
securing lever including an engaging member and an operating member, said lever being
pivotable with said operating member to cause said engaging member to engage against the
5 windshield mounted attachment member when received by said cooperating receiving
members.

43. The rearview mirror assembly of claim 42 including a stiffening insert molded within
said mirror mount.

44. The rearview mirror assembly of claim 43 wherein said stiffening insert includes a
section extending into said mounting member.

45. The rearview mirror assembly of claim 37 wherein said cooperating receiving members
are included on a forward facing surface of said mirror mount which faces the windshield
when mounted on the vehicle, said receiving members comprising spaced slide surfaces for
slidably receiving the windshield mounted attachment member when mounted thereon.

46. The rearview mirror assembly of claim 45 wherein said mirror mount includes a top and
a bottom, said slide surfaces being inclined inwardly toward one another and being spaced
closer to one another adjacent said top of said mounting member to engage and retain a
wedge shaped, double-tapered windshield mounted attachment member.

47. The rearview mirror assembly of claim 46 wherein said slide surfaces comprise resilient
spring flanges for releasably engaging the windshield mounted attachment member.

48. The rearview mirror assembly of claim 47 wherein said resilient spring flanges are
included on a spring member mounted on said forward facing surface.

49. The rearview mirror assembly of claim 48 wherein said spring member is slidably received between spaced side walls on said forward facing surface.
50. The rearview mirror assembly of claim 48 wherein said spring member is insert molded on said forward facing surface of said mirror mount.
51. The rearview mirror assembly of claim 47 wherein said resilient spring flanges are formed separately and secured to said mirror mount.
52. The rearview mirror assembly of claim 47 wherein said resilient spring flanges are formed by a pair of spaced spring bands, each spring band extending around said mirror mount and having ends extending beyond said forward facing surface for engagement with the windshield attachment member.
53. The rearview mirror assembly of claim 46 wherein said slide surfaces are formed on spaced shoulders having frangible portions adapted to release upon application of sufficient force such as during an impact to allow release of said mirror mount from the windshield mounted attachment member.
54. The rearview mirror assembly of claim 37 wherein said mirror mount further includes a vibration reducing dampening element on said another surface adjacent said receiving members for engaging the windshield mounted attachment member when said mirror mount is secured thereto.
55. The rearview mirror assembly of claim 54 wherein said vibration reducing dampening element comprises a resilient cushion.
56. The rearview mirror assembly of claim 55 wherein said cushion comprises a pad formed from at least one of foam material and rubber.
57. The rearview mirror assembly of claim 1 wherein said electrical conductors also extend through said mirror mount.

58. The rearview mirror assembly of claim 1 wherein said electrical accessory comprises an electro-optic mirror element.

59. The rearview mirror assembly of claim 1 wherein said electrical accessory comprises an electrical circuit board.

60. The rearview mirror assembly of claim 1 wherein said electrical accessory comprises at least one microphone.

61. An interior rearview mirror assembly suitable for use in a vehicle comprising:

a rearview mirror mount formed from polymeric material having a first color, said rearview mirror mount adapted for attachment to one of a windshield portion and a header portion of the vehicle;

a rearview mirror housing, said housing formed from polymeric material having a second color, and a reflective rearview mirror element included in said housing;

a rearview mirror support formed from polymeric material having a third color;

a first pivot element formed from polymeric material having a fourth color;

a second pivot element formed from polymeric material having a fifth color;

said support being pivotally attached to said mirror mount by said first pivot element, said rearview mirror housing being pivotally attached to said support by said second pivot element;

said first, second, third, fourth, and fifth colors being substantially the same color;

each of said mirror mount, said mirror support, said rearview mirror housing, said first pivot element, and said second pivot element being formed in said substantially the same color by molding from polymeric material of that color.

62. The rearview mirror assembly of claim 61 wherein said substantially the same color comprises black.

63. The rearview mirror assembly of claim 61 wherein at least one of said first and second pivot elements comprises a ball pivot member, said support having a socket which receives and frictionally engages said ball pivot member.

64. The rearview mirror assembly of claim 63 wherein said support has two ends, one of said ends including said socket, the other of said ends comprising a ball pivot member.

65. The rearview mirror assembly of claim 63 wherein said support comprises a hollow sleeve having two open ends, said socket included at one of said ends.

66. The rearview mirror assembly of claim 65 wherein the other of said two ends of said support also includes a socket which receives and frictionally engages a ball pivot member comprising the other of said first and second pivot elements.

67. The rearview mirror assembly of claim 66 wherein said support includes a spring receiving surface and an external spring member mounted on said spring receiving surface for enhanced frictional resistance to movement of a ball pivot member in said socket.

68. The rearview mirror assembly of claim 67 wherein said support includes an end surface at each end, each of said sockets being spaced inwardly from said end surface in its respective end of said support, said assembly including a pair of external spring members, each of said external spring members being positioned immediately adjacent said end surface at its respective support end.

69. The rearview mirror assembly of claim 68 wherein said external spring members each comprise an annular split ring.

70. The rearview mirror assembly of claim 67 wherein each end of said support includes a plurality of axially extending slots defining flanges therebetween, said flanges at each end of said support being compressible by said external spring member which is received thereover.

71. The rearview mirror assembly of claim 66 wherein said hollow sleeve is resilient and provides frictional resistance to pivotal movement of said ball pivot member in said socket, said ball pivot member being compression fitted in said socket and having an interference fit therein.

72. The rearview mirror assembly of claim 66 wherein the surface of each of said sockets includes at least one protrusion for engaging said ball pivot member for enhanced frictional resistance to movement of said ball pivot member.

73. The rearview mirror assembly of claim 72 wherein the surface of each of said sockets includes a plurality of micro protrusions.

74. The rearview mirror assembly of claim 66 further including a vibration dampening member positioned within said hollow sleeve intermediate said sockets.

75. The rearview mirror assembly of claim 66 further including a stiffening insert molded within said hollow sleeve.

76. The rearview mirror assembly of claim 61 wherein said electrical conductors extend through said rearview mirror support.

77. The rearview mirror assembly of claim 76 wherein each of said first and second pivot elements includes a wire passageway therethrough.

78. The rearview mirror assembly of claim 77 wherein said electrical conductors comprise wiring extending through said wire passageways through said first and second pivot elements.

79. The rearview mirror assembly of claim 78 wherein said mirror mount also includes a wire passageway therein, said wiring also extending through said wire passageway in said mirror mount.

80. The rearview mirror assembly of claim 61 wherein said electrical conductors comprise electrical bus bars molded within said rearview mirror support.

81. The rearview mirror assembly of claim 61 wherein said rearview mirror support includes an interior space therewithin, said assembly including an electrical accessory which is mounted within said interior space of said support.

82. The rearview mirror assembly of claim 63 wherein said support includes a spring receiving surface and an external spring member mounted on said spring receiving surface for enhanced frictional resistance to movement of said ball pivot member in said socket.

83. The rearview mirror assembly of claim 82 wherein said support includes an end surface at said one end of said support, said socket being spaced inwardly from said end surface, said external spring member being positioned immediately adjacent said end surface.

84. The rearview mirror assembly of claim 61 wherein said rearview mirror support includes a cable-way through which said electrical conductors pass.

85. The rearview mirror assembly of claim 61 wherein said rearview mirror mount includes a means on one surface for pivotal attachment to said support, and cooperating receiving members on another surface which engage a windshield mounted attachment member on the inside surface of the windshield of the vehicle on which said assembly is mounted.

86. The rearview mirror assembly of claim 85 wherein said means for pivotal attachment to said support comprise a projection including a ball pivot member forming said first pivot element.

87. The rearview mirror assembly of claim 86 wherein said mirror mount includes a body having an interior surface facing the interior of the vehicle when mounted on the vehicle, said mounting projection extending from said interior surface at a position centered with respect to the position of said receiving members.

88. The rearview mirror assembly of claim 85 wherein said mirror mount further includes a fastener for securing said mirror mount to the windshield mounted attachment member.

89. The rearview mirror assembly of claim 85 wherein said mirror mount further includes a securing lever which is movable between a first release position and a second securing position, said lever adapted to engage the windshield mounted attachment member when moved to said second securing position and said receiving members engage the windshield attachment member to retain the mirror mount on the windshield mounted attachment member.

90. The rearview mirror assembly of claim 89 including a stiffening insert molded within said mirror mount.

91. The rearview mirror assembly of claim 85 wherein said cooperating receiving members are included on a forward facing surface of said mirror mount which faces the windshield when mounted on the vehicle, said receiving members comprising spaced slide surfaces for slidably receiving the windshield mounted attachment member when mounted thereon.

92. The rearview mirror assembly of claim 91 wherein said mirror mount includes a top and a bottom, said slide surfaces being inclined inwardly toward one another and being spaced closer to one another adjacent said top of said mounting member to engage and retain a wedge shaped, double-tapered windshield mounted attachment member.

93. The rearview mirror assembly of claim 92 wherein said slide surfaces comprise resilient spring flanges for releasably engaging the windshield mounted attachment member.

94. The rearview mirror assembly of claim 85 wherein said mirror mount further includes a vibration reducing dampening element on said another surface adjacent said receiving members for engaging the windshield mounted attachment member when said mirror mount is secured thereto.

95. An interior rearview mirror assembly suitable for use in a vehicle comprising:
a rearview mirror mount formed from polymeric material having a first color, said rearview mirror mount adapted for attachment to one of a windshield portion and a header portion of the vehicle;

5 a rearview mirror housing, said housing formed from polymeric material having a second color, and a reflective rearview mirror element included in said housing;

a rearview mirror support formed from polymeric material having a third color;

a first pivot element formed from polymeric material having a fourth color;

a second pivot element formed from polymeric material having a fifth color;

10 said support being pivotally attached to said mirror mount by said first pivot element, said rearview mirror housing being pivotally attached to said support by said second pivot element;

at least two of said mirror mount, said mirror support, said rearview mirror housing,
said first pivot element and said second pivot element being molded from polymeric
15 materials of different colors;

each of said mirror mount, said mirror support, said rearview mirror housing, said first
pivot element, and said second pivot element being formed in its respective color by molding
from polymeric material of that color.

96. The rearview mirror assembly of claim 95 wherein one of said different colors is black.

97. The rearview mirror assembly of claim 95 wherein at least one of said first and second
pivot elements comprises a ball pivot member, said support having a socket which receives
and frictionally engages said ball pivot member.

98. The rearview mirror assembly of claim 97 wherein said support has two ends, one of said
ends including said socket, the other of said ends comprising a ball pivot member.

99. The rearview mirror assembly of claim 97 wherein said support comprises a hollow
sleeve having two open ends, said socket included at one of said ends.

100. The rearview mirror assembly of claim 99 wherein the other of said two ends of said
support also includes a socket which receives and frictionally engages a ball pivot member
comprising the other of said first and second pivot elements.

101. The rearview mirror assembly of claim 100 wherein said support includes a spring
receiving surface and an external spring member mounted on said spring receiving surface
for enhanced frictional resistance to movement of a ball pivot member in said socket.

102. The rearview mirror assembly of claim 101 wherein said support includes an end
surface at each end, each of said sockets being spaced inwardly from said end surface in its
respective end of said support, said assembly including a pair of external spring members,
each of said external spring members being positioned immediately adjacent said end surface
5 at its respective support end.

103. The rearview mirror assembly of claim 102 wherein said external spring members each comprise an annular split ring.

104. The rearview mirror assembly of claim 101 wherein each end of said support includes a plurality of axially extending slots defining flanges therebetween, said flanges at each end of said support being compressible by said external spring member which is received thereover.

105. The rearview mirror assembly of claim 100 wherein said hollow sleeve is resilient and provides frictional resistance to pivotal movement of said ball pivot member in said socket, said ball pivot member being compression fitted in said socket and having an interference fit therein.

106. The rearview mirror assembly of claim 100 wherein the surface of each of said sockets includes at least one protrusion for engaging said ball pivot member for enhanced frictional resistance to movement of said ball pivot member.

107. The rearview mirror assembly of claim 106 wherein the surface of each of said sockets includes a plurality of micro protrusions.

108. The rearview mirror assembly of claim 100 further including a vibration dampening member positioned within said hollow sleeve intermediate said sockets.

109. The rearview mirror assembly of claim 100 further including a stiffening insert molded within said hollow sleeve.

110. The rearview mirror assembly of claim 95 wherein said electrical conductors extend through said rearview mirror support.

111. The rearview mirror assembly of claim 110 wherein each of said first and second pivot elements includes a wire passageway therethrough.

112. The rearview mirror assembly of claim 111 wherein said electrical conductors comprise wiring extending through said wire passageways through said first and second pivot elements.

113. The rearview mirror assembly of claim 111 wherein said mirror mount also includes a wire passageway therein, said wiring also extending through said wire passageway in said mirror mount.

114. The rearview mirror assembly of claim 95 wherein said electrical conductors comprise electrical bus bars molded within said rearview mirror support.

115. The rearview mirror assembly of claim 95 wherein said rearview mirror support includes an interior space therewithin, said assembly including an electrical accessory which is mounted within said interior space of said support.

116. The rearview mirror assembly of claim 97 wherein said support includes a spring receiving surface and an external spring member mounted on said spring receiving surface for enhanced frictional resistance to movement of said ball pivot member in said socket.

117. The rearview mirror assembly of claim 116 wherein said support includes an end surface at said one end of said support, said socket being spaced inwardly from said end surface, said external spring member being positioned immediately adjacent said end surface.

118. The rearview mirror assembly of claim 95 wherein said rearview mirror support includes a cable-way through which said electrical conductors pass.

119. The rearview mirror assembly of claim 95 wherein said rearview mirror mount includes means on one surface for pivotal attachment to said support, and cooperating receiving members on another surface which engage a windshield mounted attachment member on the inside surface of the windshield of the vehicle on which said assembly is mounted.

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120. The rearview mirror assembly of claim 119 wherein said means for pivotal attachment to said support comprise a projection including a ball pivot member forming said first pivot element.

121. The rearview mirror assembly of claim 120 wherein said mirror mount includes a body having an interior surface facing the interior of the vehicle when mounted on the vehicle, said

mounting projection extending from said interior surface at a position centered with respect to the position of said receiving members.

122. The rearview mirror assembly of claim 121 wherein said mirror mount further includes a fastener for securing said mirror mount to the windshield mounted attachment member.

123. The rearview mirror assembly of claim 121 wherein said mirror mount further includes a securing lever which is movable between a first release position and a second securing position, said lever adapted to engage the windshield mounted attachment member when moved to said second securing position and said receiving members engage the windshield attachment member to retain the mirror mount on the windshield mounted attachment member.

124. The rearview mirror assembly of claim 123 including a stiffening insert molded within said mirror mount.

125. The rearview mirror assembly of claim 119 wherein said cooperating receiving members are included on a forward facing surface of said mirror mount which faces the windshield when mounted on the vehicle, said receiving members comprising spaced slide surfaces for slidably receiving the windshield mounted attachment member when mounted thereon.

126. The rearview mirror assembly of claim 125 wherein said mirror mount includes a top and a bottom, said slide surfaces being inclined inwardly toward one another and being spaced closer to one another adjacent said top of said mounting member to engage and retain a wedge shaped, double-tapered windshield mounted attachment member.

127. The rearview mirror assembly of claim 126 wherein said slide surfaces comprise resilient spring flanges for releasably engaging the windshield mounted attachment member.

128. The rearview mirror assembly of claim 119 wherein said mirror mount further includes a vibration reducing dampening element on said another surface adjacent said receiving members for engaging the windshield mounted attachment member when said mirror mount is secured thereto.